Technology Leadership
for Digital Cinema

H2S-30

User Manual

Version 1.3

Compliant with H2S-30 Firmware version 1.6.0
and H2S-30 Doremi Universal Interface Software 4.2.3

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Software License Agreement

The software license agreement can be found at the following location:

http://www.doremilabs.com/support/proav-support/proav-warranties/

Hardware Warranty

The hardware warranty can be found at the following location:
http://www.doremilabs.com/support/proav-support/proav-warranties/

HDMI

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

WARNING

THIS DEVICE MUST BE GROUNDED

IMPORTANT

Power requirements for electrical equipment vary from area to area. Please ensure that the H2S-30 meets the power requirements in the surrounding area. If in doubt, consult a qualified electrician or a Doremi Labs dealer.

H2S-30 Power Ratings

- The H2S-30 should only be used with a Doremi approved power supply.

- Power Supply Specifications:
  - AC Input: 100-240V~, 1.2A, 50-60Hz
  - Output 12V DC, 3.0A (36W Max.)
- H2S-30 Power Requirements
  - 12V DC, .12A

Protecting Yourself and the H2S-30

Never touch the AC plug with wet hands. Always disconnect the H2S-30 from the power supply by pulling on the plug, not the cord. Allow only a Doremi Labs dealer or qualified professional engineer to repair or re-assemble the H2S-30. Apart from voiding the warranty, unauthorized engineers might touch live internal parts and receive a serious electric shock. Do not put, or allow anyone to put any object, especially metal objects, into the H2S-30. Use only Doremi approved power supply.

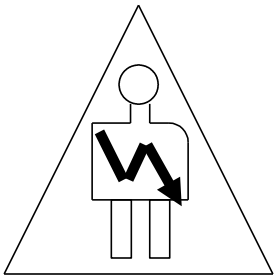
If water or any other liquid is spilled into or onto the H2S-30, disconnect the power and call a Doremi dealer. The unit must be well ventilated and away from direct sunlight. To avoid damage to internal circuitry, as well as the external finish, keep the H2S-30 away from direct sources of heat (heater vents, stoves, radiators). Avoid using flammable aerosols near the H2S-30. They can damage the surface area and may ignite. Do not use denatured alcohol, paint thinner, or similar chemicals to clean the H2S-30. This can damage the unit.

Modification of this equipment is dangerous and can result in the functions of the H2S-30 being impaired. Never attempt to modify the equipment in any way. In order to ensure optimum performance of the H2S-30, select the setup location carefully and make sure the equipment is used properly. Avoid setting up the H2S-30 in the following locations:

- In a humid or dusty environment.
- In a room with poor ventilation.
- On a surface which is not level.
- Inside a moving vehicle where it will be subject to vibration.
- In an extremely hot or cold environment.

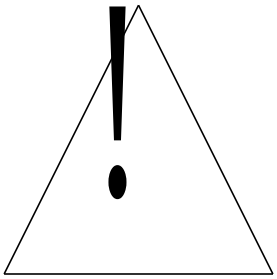
WARNING!!

To prevent fire or shock hazard, do not expose this appliance to rain or moisture

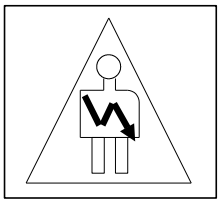


CAUTION

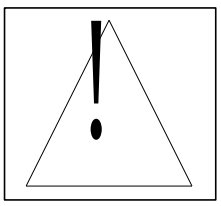
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with the arrowhead symbol superimposed across a graphical representation of a person, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure; that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CE NOTICE

Marking by the symbol CE indicates compliance of the device to the EMC (Electromagnetic Compatibility) directive and to the Low Voltage directive of the European Community. The marking is indicative that the device meets or exceeds the following technical standards:

- EN 55022 "Limits and Methods of Measurement of Radio Interface Characteristics of Information Technology Equipment".

- A "Declaration of Conformity" in accordance with the above standard has been made and is on file at Doremi.

1 Introduction

1.1 Purpose

This document provides guidance on how to use the H2S-30 HDMI® to SDI converter that incorporates High-Definition Multimedia Interface technology, as well as the Doremi Universal Interface Software (DUIS). It explains all features of the H2S as well as the infrared remote control and how to upgrade the firmware.

1.2 Software Version

- DUIS software version 4.2.3
- H2S-30 Firmware version 1.6.0

1.3 Contact Information

If in need of help or assistance, please contact Doremi Labs Technical Services at **+ 1-818-562-1101** or email at proavsupport@doremilabs.com.

2 H2S-30 Overview

2.1 H2S-30 Description

The H2S-30 is an HDMI to SDI format converter featuring HDMI and SDI connectors that allow for any HDMI input to be converted to any supported SDI output format or scan rate. It supports both SD and HD video and employs 12 bit bi-cubic interpolation to ensure the highest quality picture. It also supports 3G SDI and can tackle many conversion tasks.

2.1.1 H2S-30 Top View

Figure 1: H2S-30 Top View

2.1.2 H2S-30 Front Panel

The H2S-30 front panel is illustrated below:

Figure 2: H2S-30 Front Panel View

2.1.3 H2S-30 Rear Panel

The H2S-30 rear panel is illustrated below:

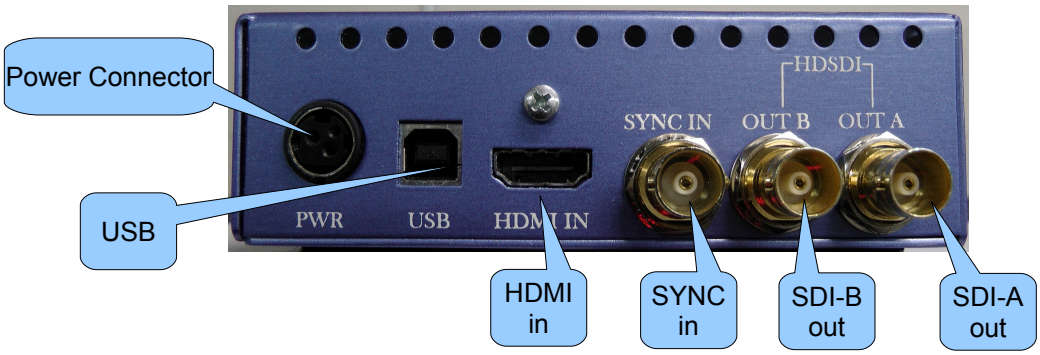


Figure 3: H2S-30 Rear Panel View

The rear panel has the following connectors:

Connector	Description
USB	USB connector
HDMI in	HDMI input connector
SDI-A out	SDI output connector – Link A
SDI-B out	SDI output connector – Link B
SYNC in	Sync input connector
Power	Power supply connector

2.2 Supported Formats

The table below summarizes all supported inputs and outputs available on the H2S-30.

Supported Input(s)	Supported Output(s)
HDMI: Supported input formats are listed below: 640x480 = VGA 720x480i = 480i 720x480p = 480p 1440x480i = 480i 720x576i = 576i 720x576p = 576p 1440x576i = 576i 800x600 = SVGA 1280x720 = 720p 1024x768 = XGA 1280x768 = WXGA 1364x768 = WXGA 1366x768 = WXGA 1536x768 = 1536x768 1152x864 = XGA+ 1280x960 = SXGA- 1280x1024 = SXGA 1364x1024 = 1364x1024 1400x1050 = SXGA+ 1680x1050 = WSXGA+ 1920x1080i = 1080i 1920x1080p = 1080p 2048x1080 = 2Kp 1600x1200 = UXGA 1920x1200 = WUXGA	**SD-SDI**: NTSC, PAL (SMPTE 259M-C 4:3 or 16:9, SMPTE 259M-C 4:3 or 16:9) **HD-SDI**: all HD formats (SMPTE 274, SMPTE296, SMPTE372, SMPTE 424M 3G SDI). **Note**: 3G SDI supported features include: 1080p at fps ≥ 47.95.

3 H2S OSD Menu System Overview

The H2S-30 is configured using the IR remote control to access the menu system through the OSD (see Section 4). Or by using the Doremi Universal Interface Software (DUIS) - see Section 5.

3.1 Input Menu

The Input menu can be used to set up the input parameters.

Sub-Menu	Value	Description
Interface	HDMI/DVI Pattern	Input interface setting. Pattern produces 100% color bar patterns with 8 channels of audio. The odd channels being at 1kHz and the even channels at 2kHz.
HDMI/DVI color	Auto RGB RGB ext YCbCr 601 YCbCr 601 ext YCbCr 709 YCbCr 709 ext	HDMI/DVI input color setting. Auto: Usually RGB. Ext: designates extended color range (full bandwidth) as opposed to limiting the color spectrum to comply with ITU standards.
Default EDID	720p 50 720p 60 1080i 25 1080i 30 1080p 50 1080p 60 WUXGA 50 WUXGA 60	Default EDID setting. When you feed a signal to the HDMI input, the H2S-30 has to report a native resolution over EDID. This menu allows the user to change the default resolution of the H2S-30 between the available formats. **CAUTION:** Disconnect the HDMI/DVI source before changing this setting.

3.2 Output Menu

The Output menu can be used to set up the output parameters. See table below for more information.

Sub-Menu	Value	Description
Interface	SDI	The output interface is set to SDI by default. It is the only output interface available.
SDI Color	Auto RGB RGB ext YCbCr 601 YCbCr 601 ext YCbCr 709 YCbCr 709 ext XYZ'	Set the SDI output color mode Auto: 601 (SD) 709 (HD), RGB (2K) Ext: designates extended color range (full bandwidth) as opposed to limiting the color spectrum to comply with ITU standards. **Note**: XYZ Colorspace is non-linear.
SDI Resolution	NTSC PAL 720p 1080i/sf 1080p 2Kp 2Kp Flat Match Input	Set the SDI output pixel resolution. Match Input: In this mode, the SDI output will have the same resolution as the input source.

Sub-Menu	Value	Description
SDI Frequency	23.98 24 25 29.97 30 47.95 48 50 59.94 60 Match Input Match Input x2	Set the SDI output frame rate. Match Input: In this mode, the unit will set the SDI output resolution to match the input resolution – or to the closest output resolution if the exact input resolution is not available. Match Input x2: Match input x2 will output twice the input frame rate. e.g. Input= 1080p 30; Output= 1080p 60
SDI Force Interl	Off On	Force the SDI output to interlaced (or Segmented Frame)
Ancillary out	Off Bypass SDI	Set the Ancillary data on the SDI output. - Off: No VANC on SDI output. - Bypass SDI: Pass Ancillary data from HDMI input to SDI output.
Time Code	Off Bypass SDI Free wheel	Set the embedded (SDI output) Time code mode. Off: No embedded timecode on SDI output. Bypass SDI: Pass embedded timecode from HDMI input to SDI output. Free wheel: Generate embedded Time Code starting at the moment this option is enabled.

3.2.1 Color Space

The ITU-R BT.709-5 (HD formats) and ITU-R BT.601-5 (SD formats) standards define the range of color values in a digital signal to be:

- 16 to 240 for 8bit coding
- 64 to 960 for 10bit coding

The H2S-30 color space conversion supports these standards, but it also supports full range by allowing the color values to be between:

- 0 to 255 for 8bit coding
- 0 to 1023 for 10bit coding

On the H2S-30, the full range modes are designated by the “ext” following the color space conversion mode.

3.3 Image Menu

The Image menu can be used to set up the image parameters.

Sub-Menu	Value	Description
Brightness	0% to 100%	Brightness value setting
Contrast	0% to 100%	Contrast value setting
Scaling	Aspect Ratio Fill Aspect Fit H Aspect Fit V One to One	Scaling value setting Aspect Ratio: Maintain input aspect ratio. Fill: Scale to fill the output resolution. Aspect Fit H (V): Scale Horizontally (Vertically) to fill the output resolution. One to One: No Scaling.
De-interlacing	Off On Motion	Set the De-interlacing mode. Motion: De-interlacing is based on motion.
SD Ratio	4:3 Digital 16:9 Digital 4:3 Analog 16:9 Analog	Define the source PAR for SD formats. For source PAR of 8:9 or 16:15 use 4:3 Digital or 16:9 Digital. For source PAR of 10:11 or 59:54 use 4:3 Analog or 16:9 Analog.

Sub-Menu	Value	Description
Input LUT	User Defined 0.1 to 4.0	Set the input Gamma correction. For User Defined Input LUT use the DUIS software (see Section 5.4.3)
Output LUT	User Defined 0.1 to 4.0	Set the output Gamma correction. For User Defined Output LUT use the DUIS software (see Section 5.4.3)

3.4 Sync Menu

The Sync menu can be used to set up the sync parameters.

Sub-Menu	Value	Description
Input	HDMI/DVI Extern	Extern: Sync is derived from the Sync Input connector.
H offset	X pixels	Horizontal Sync offset in pixels
V offset	X lines	Vertical Sync offset in lines

3.5 Audio Menu

The Audio menu can be used to set up the audio parameters.

Sub-Menu	Value	Description
Input	DVI/HDMI	Audio input is set to DVI/HDMI by default. It is the only input interface available.
Delay	X frames	Audio delay setting from -1 to +2 frames.
Level	-18, -12, -6, 0, +6, +12, +18 dB	Audio Output level setting.
Swap Channels 3 and 4	Off On	When selected input channel 3 will be output on channel 4 and input channel 4 will be output on channel 3.
SDI Out Groups	Auto 1 1+2 1+2+3 1+2+3+4 Off	Set the embedded SDI active audio groups. Auto: All audio inputs will be present on the SDI output. Each group has 4 audio channels, when 1+2+3+4 is selected, all 16 audio channels will be present. Off: No embedded audio on SDI output.

3.5.1 Supported Audio Sample Rates

- HDMI Input: 48 kHz
- SDI Output: 48 kHz

Note: The H2S-30 does not support audio sample rate conversions. If using the Embedded SDI Audio output, you must use 48 kHz audio on the HDMI input. Using unsupported audio sample rates will result in degraded audio output.

3.6 On Screen Display (OSD) Menu

The OSD menu can be used to set up the OSD parameters.

Sub-Menu	Value	Description
OSD Enable	Yes No	Enable or disable On Screen Display.
OSD timeout	X s (seconds)	On Screen Display timeout in seconds. Set to Infinite to keep it always on.
OSD H Position	Horizontal Position Bar	OSD horizontal position
OSD V position	Vertical Position Bar	OSD vertical position
OSD Status The OSD Status will show the burn-in window timecode, I/O status and audio levels when the OSD is not active.	Off TC BIW Input Status Output Status	Burn In Window and Status display Off: BIW and Status not displayed TC BIW: Timecode is shown in a burn-in window on the H2S-30 output Input Status: In addition to the timecode BIW, the H2S-30 output will display the Input Status including Audio levels, Closed Caption presence, Input Format and CRC errors (flashing red dot). Output Status: In addition to the timecode BIW, the H2S-30 output will display the Output Status.
TC Color	White/Black W/B Zoom Black/White B/W Zoom	Burn In Window type setting.

3.7 System Menu

The System menu allows access to the system parameters.

Sub-Menu	Description
Save	Save current settings to flash. Select to Save, when the “?” appears select again to confirm
Firmware: x.y	Firmware version
Serial: zzzzzzz	Serial number
License: uuuuuuuu	License number
Temp: vv C	Temperature (in degree Celsius)
Standby	Standby mode: Puts the unit in Power Down mode
Auto Standby	Auto Standby mode: Sets the idle time duration before the unit goes in power down mode automatically
IR	Infra-Red. To avoid IR interference with multiple H2S-30 units, assign each a different IR code from 0x0 to 0xF (16 total) default is 0. Set the DIP switch on the Doremi IR remote accordingly The IR channel can also be set to OFF, which disables the IR remote control completely

3.8 Status Menu

The Status menu can be used to view the Input and Output status.

Sub-Menu	Description
In: Out:	Input and Output format status information

4 Infrared Remote Controller

The Menu System can be accessed using the IR remote controller in conjunction with the OSD. Pressing the Menu button will invoke the menu system. The Left arrow, Right arrow, Select and Exit buttons can be used to navigate the OSD menu selections and set up the H2S-30.

4.1 Remote Controller Overview

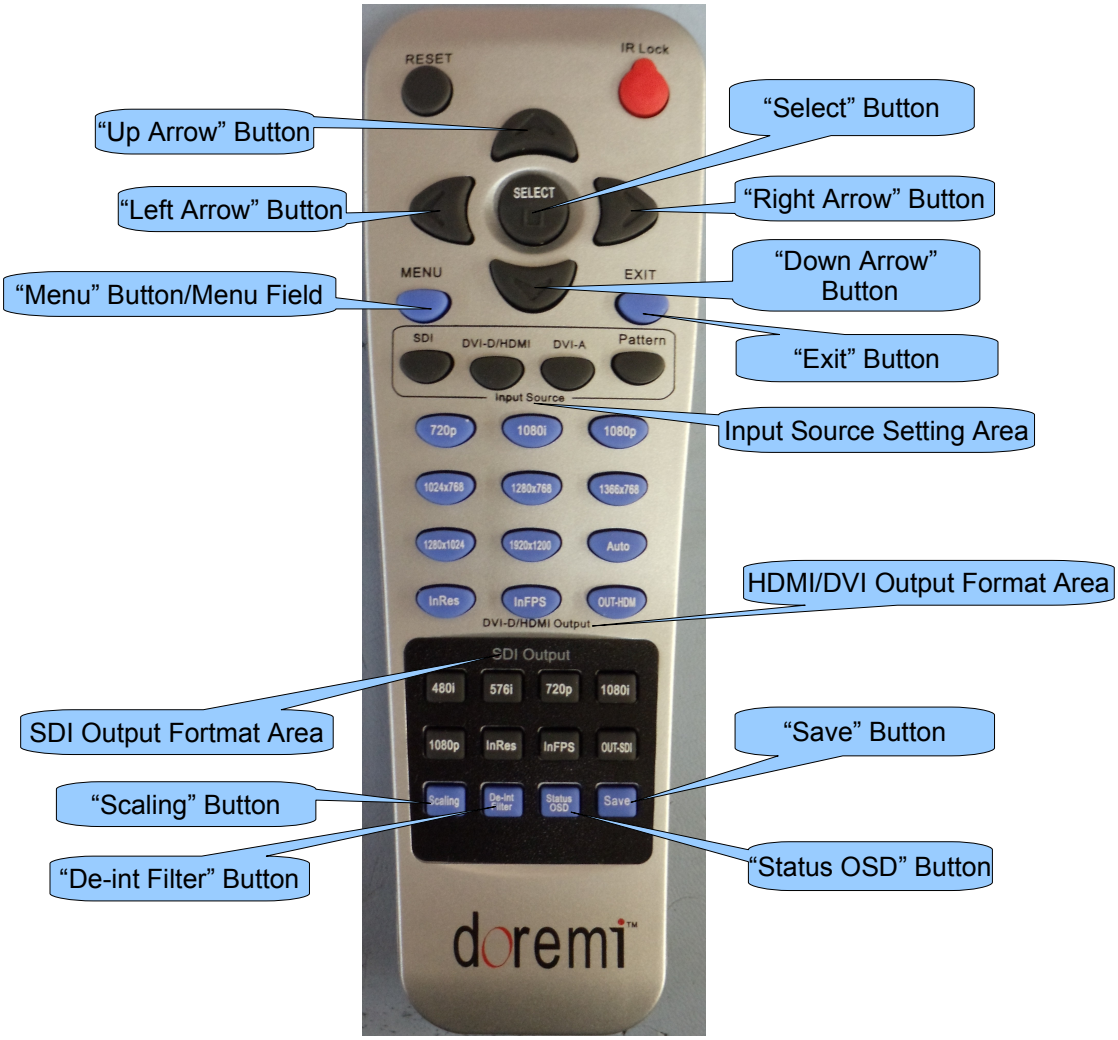


Figure 4: Infrared Remote Controller

- The remote controller is divided into four different areas:
- Input Source Setting
- Navigation or Menu System
- HDMI/DVI Output Format (unused with H2S-30)
- SDI Output Format

4.2 Remote Controller Functions

Remote Control	Function
Input source selection	Select: DVI-D/HDMI, or Pattern. **Note**: SDI and DVI-A buttons are unused
“IR lock” button	Unused
“Reset” button	Unused
“Menu” button	Invoke the Menu System
“Exit” button	Back one menu level
SDI Output format area	Force the SDI output to: 480i 576i 720p 1080i 1080p InRes (SDI Resolution Match Input) InFps (SDI Frequency Match Input) More formats are available through the menu system
“Up Arrow” button	Unused
“Down Arrow” button	Unused
“Left Arrow” button	Navigate OSD left
“Right Arrow” button	Navigate OSD right
“Select” button	Ok/Select
Scaling	Cycles through the image settings
De-Int Filter	Cycles through the available De-int Filter settings
Status OSD	Cycles through the OSD status options
Save	Saves the current settings to flash

4.3 Input Source Setting

- To select the Input Format, press one of the buttons available in the Input Source field (see Figure 5).

Figure 5: Input Format Setting

- The user has the choice between DVI-D/HDMI and Pattern. The Pattern button will generate color bars with 8 channels of audio at different frequencies (see Figure 5).

Note: The SDI and DVI-A buttons are unused.

4.3.1 SDI Output Format

- To set the Output Format to a specific SDI format, press “OUT-SDI” on the IR controller.
- Then, press the Output format to set: 480i, 576i, 720p, 1080i, 1080p, InRes, InFPS, (more formats are available through the menu system). See Figure 6 below for more information.

Figure 6: Quick SDI Output Format Setting

4.3.2 Setting the IR Channel

When using multiple H2S-30 units, you can avoid interference by pairing each unit to an individual remote. Assign each H2S-30 a different IR code from 0x0 to 0xF (16 total), and set the dip-switches on the Doremi IR remote accordingly.

- Using the OSD or the DUIS software, set the IR channel to the desired setting between the hex values 0x0 and 0xF.
- Remove the battery cover on the rear of the IR remote and set the four dip-switches below the battery bay to the corresponding value.

Note: The 4 dip-switches represent the binary values 1, 2, 4, 8 (from left to right).

- **Example:**
  - If using IR channel 6, set the dip-switches 2 and 3 to the high position.

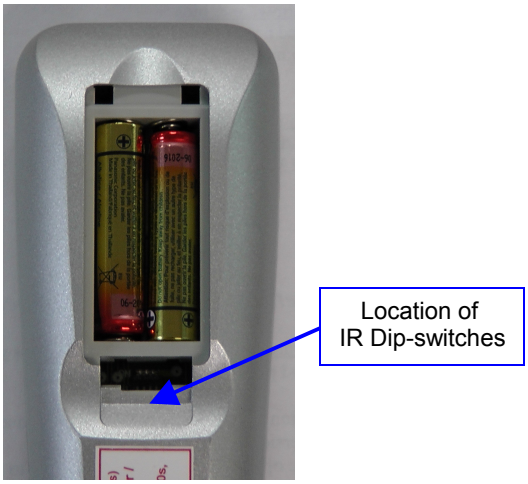


Figure 7: IR Channel Dip-Switches

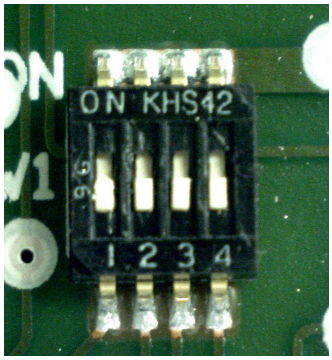


Figure 8: IR Channel Dip-Switches Close Up

5 Doremi Universal Interface Software (DUIS)

5.1 DUIS Installation

To install the Doremi Universal Interface Software, follow the steps below:

- Plug the USB cable between the H2S-30 and an available USB port on a computer.
- If the "Found New Hardware Wizard" window appears click “Cancel.”
- Run the installation package by double-clicking on the file “Doremi_Universal_Interface_Software-4.2.2.0.exe,” which can be downloaded from: http://www.doremilabs.com/
- After the installation is over, the "Found New Hardware Wizard" will appear:

Note: For Windows 7 users, the "Found New Hardware Wizard" will not appear.

- Go through all the steps shown below:
- Select the “No, not this time” option and then click “Next >” (see Figure 9).

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).
Read our privacy policy
Can Windows connect to Windows Update to search for software?
Yes, this time only
Yes, now and every time I connect a device
No, not this time
Click Next to continue.
< Back
Next >
Cancel

Figure 9: ”Found New Hardware Wizard” Window Step 1

- When asked for the type of software installation, choose the option “Install the software automatically (recommended).” See Figure 10.

Found New Hardware Wizard
This wizard helps you install software for:
Doremi GhX Board
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

Figure 10: ”Found New Hardware Wizard” Window Step 2

- When the driver installation is complete, click on the “Finish” button (see Figure 11).

Figure 11: ”Found New Hardware Wizard” Window Last Step

- Run the DUIS and verify that there is a proper connection.
- If the "Hardware Installation" warning window appears, click on the “Continue Anyway” button (see Figure 12 & 13).

Hardware Installation
The software you are installing for this hardware:
Doremi GHX Board
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

Figure 12: Hardware Installation Warning Window

Windows Security
Windows can't verify the publisher of this driver software
Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.
Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
See details

Figure 13: Hardware Installation Warning Window for Windows 7

5.2 Doremi Universal Interface Software Overview

The Doremi Universal Interface Software can control one or more H2S-30 devices connected to a workstation through USB.

- When starting the DUIS, the following window will appear:

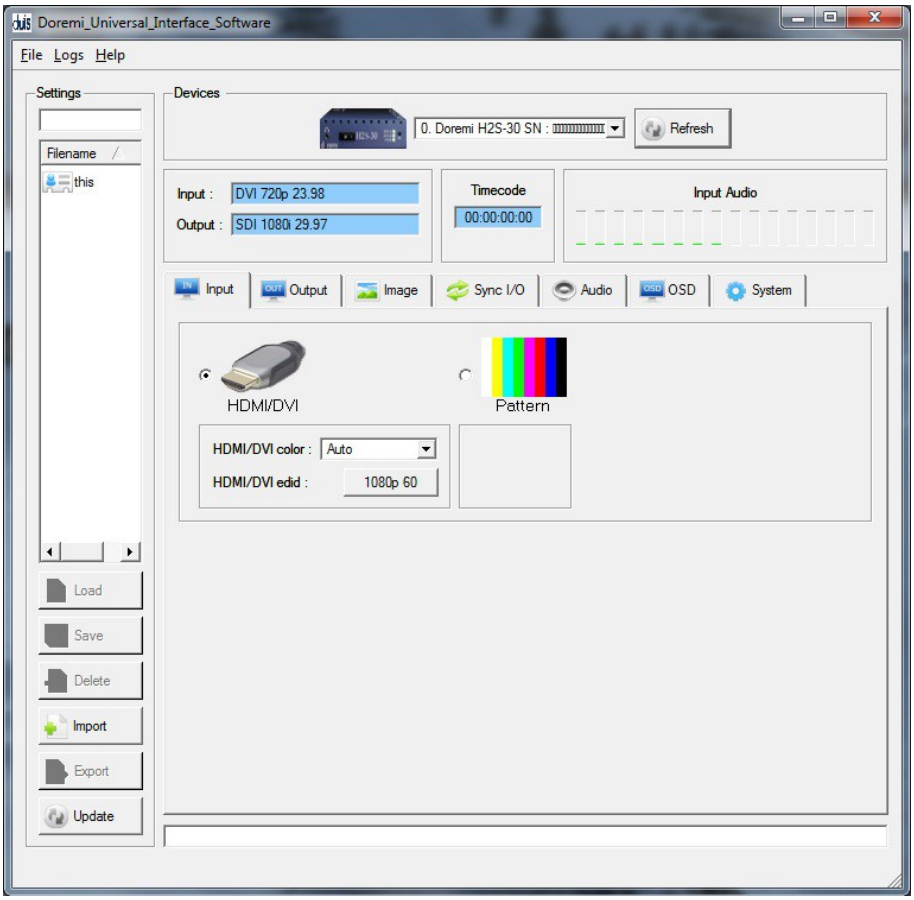


Figure 14: H2S-30 Control Panel Window Input Tab

- The DUIS is composed of the following parts:
- The “Devices” field, located on the top of the window, can be used to select a connected H2S-30 from the drop down menu. Click on the “Refresh” button to see if all the connected H2S-30 units are visible (see Figure 14).
- The “Information” field located just below the “Devices” field provides information about the input, output, current 'timecode," and the audio input level of the connected H2S-30 device (see Figure 14).
- The “Control” field located below the "Information" field has tabs that can be used to view or modify various settings on the connected H2S-30 unit. These settings include Input, Output, Image, Sync I/O, Audio, OSD, and System. These tabs are presented in Section 5.4 (see Figure 14).
- The “Settings” field located on the left part of the screen allows the user to manage the settings files. The “Settings” field is presented in Section 5.3 below.

5.3 Settings Field

The Settings field can be used to manage the settings files.

- To save the current H2S-30 configuration settings into a file, enter a settings "filename" into the “Settings” text box in the top left corner and then click on the “Save” button.
- The saved settings file will appear in the “Settings” field.

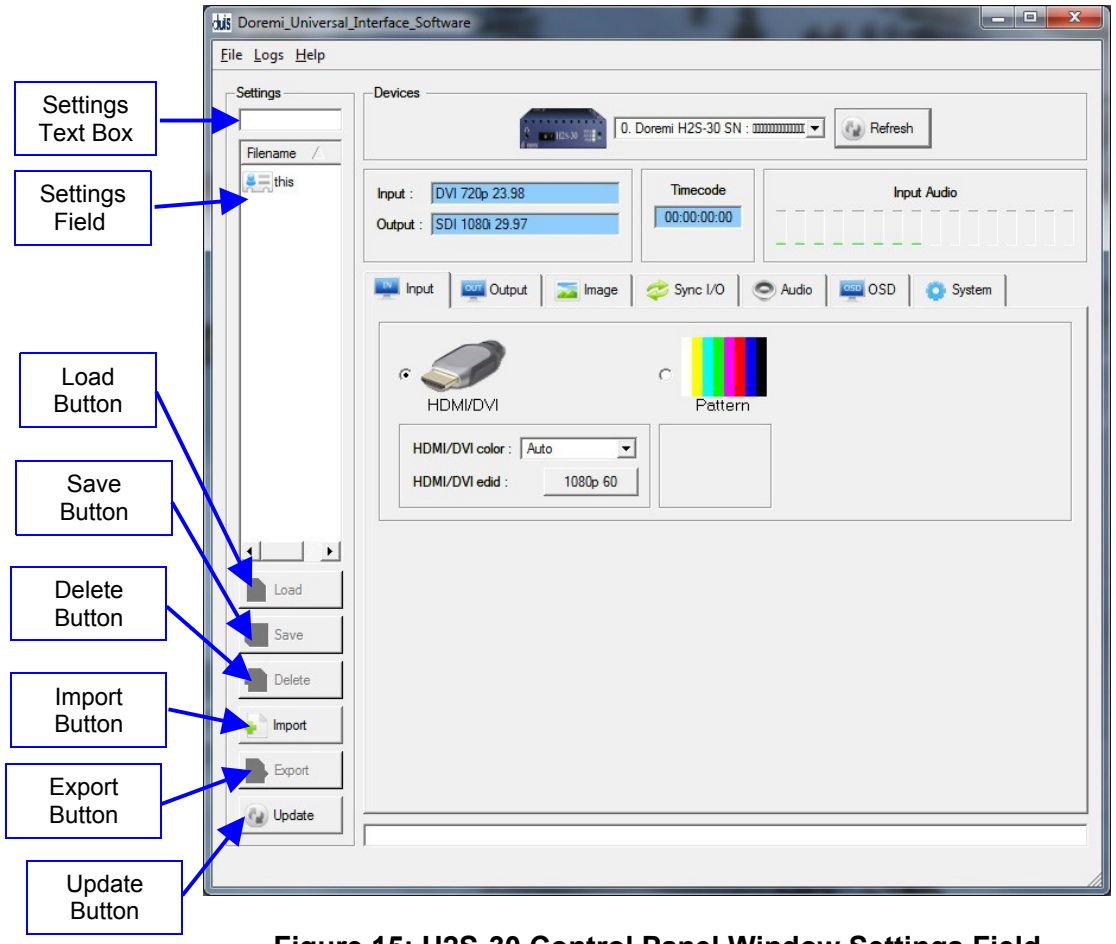


Figure 15: H2S-30 Control Panel Window Settings Field

- To export the settings file to a specified location, select it in the “Settings” field and click on the “Export” button. The user will be asked to confirm where to export the file using a standard “Save as” dialog box (see Figure 15).
- To import an existing settings file from a .ghx file into the “Settings” field, click on the “Import” button. Browse the files to select the appropriate “settings file” to import (see Figure 15).
- The imported file will appear in the “Settings” field on the left part of the window. To apply the settings to the connected H2S-30 unit, select the file and click on the “Load” button. The H2S-30 settings will be updated (see Figure 15).
- To delete a settings file present in the “Settings” field, select it and click on the “Delete” button (see Figure 15).
- To update the “Settings” field to reflect the content of the “User Settings” folder of the H2S-30 Control Panel application (folder where all the settings files are stored), click on the “Update” button (see Figure 15).

Note: The "Load," "Save," "Delete," "Import," "Export," and "Update" buttons become enabled when the user selects the file from the "Settings" field (see Figure 15).

5.4 Tabs Description

5.4.1 Input Tab

The Input tab is illustrated in Figure 14 and Figure 15 above. All parameters are explained earlier in this manual in Section 3.1.

5.4.2 Output Tab

The Output tab is illustrated below in Figure 16.

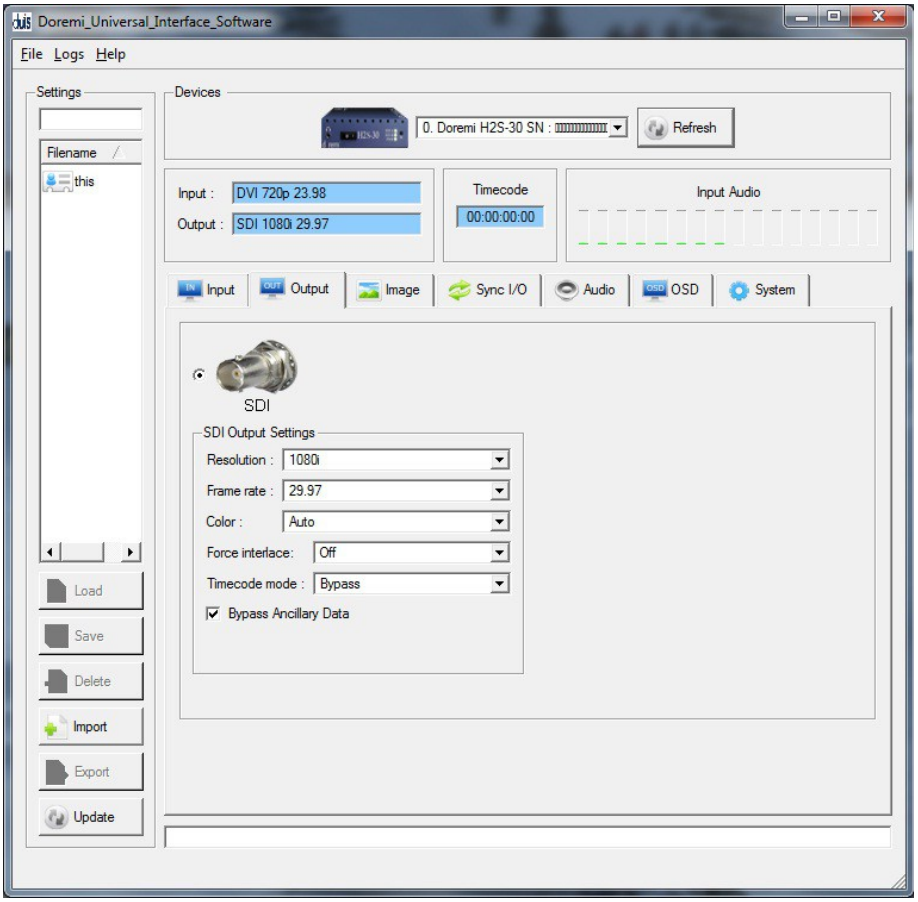


Figure 16: H2S-30 Control Panel Output Tab

All parameters are explained earlier in this manual in Section 3.2.

5.4.3 Image Tab

The Image tab is illustrated below in Figure 17.

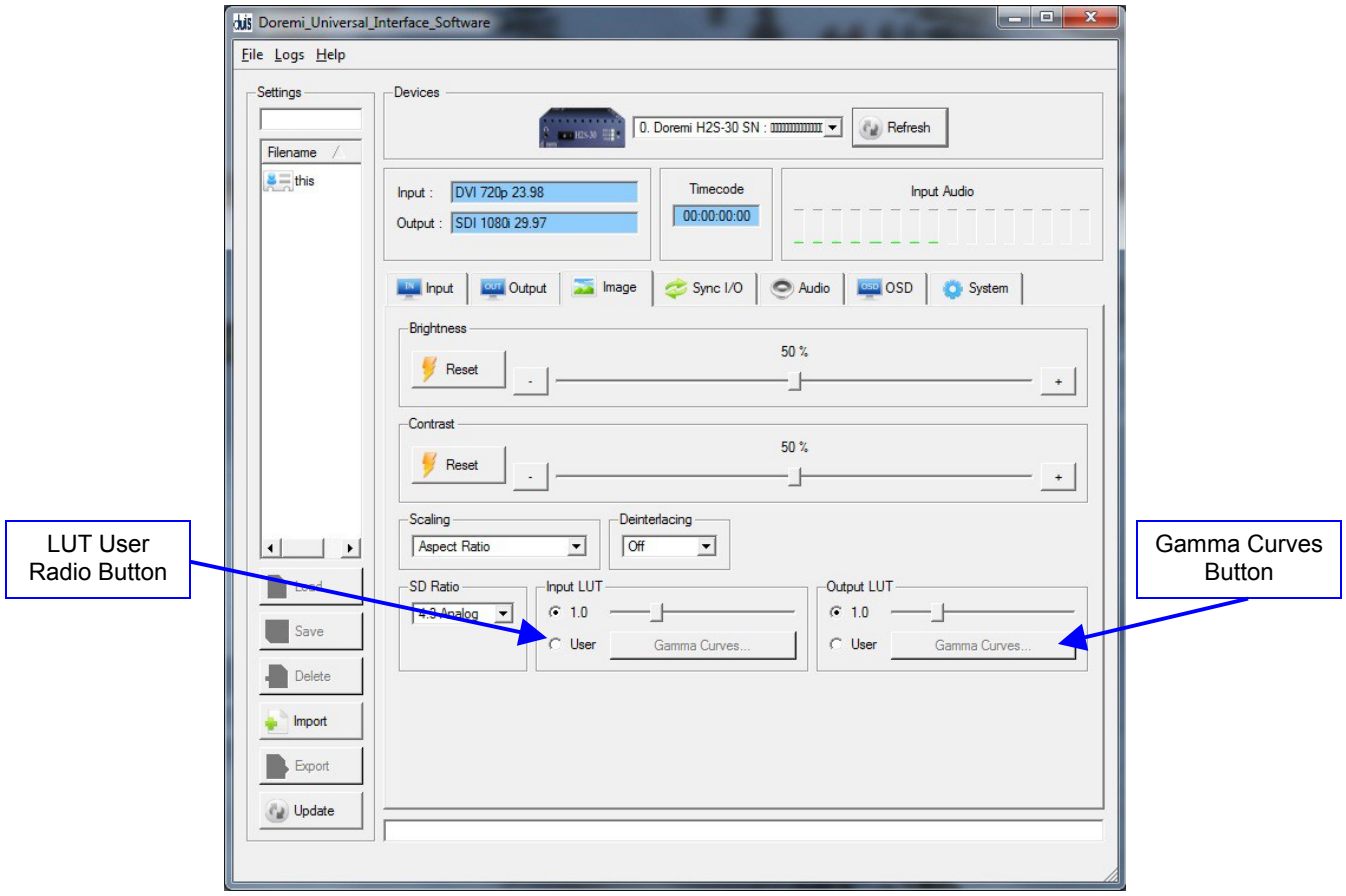


Figure 17: H2S-30 Control Panel Image Tab

All parameters are explained earlier in this manual in Section 3.3.

- To define either an Input or Output Gamma Curve, click the corresponding “User” radio button and then press the “Gamma Curves...” button.
- From the Gamma Correction pop-up window (see Figure 18), you can adjust the Gamma Curves by “Formula” by adjusting the slider bars in the “Formula Editing” section or by loading a file.
- To load a file, select the “File” radio button in the “Gamma Curves Source” section then press the “All Colors LUT..” button and browse for the appropriate file.

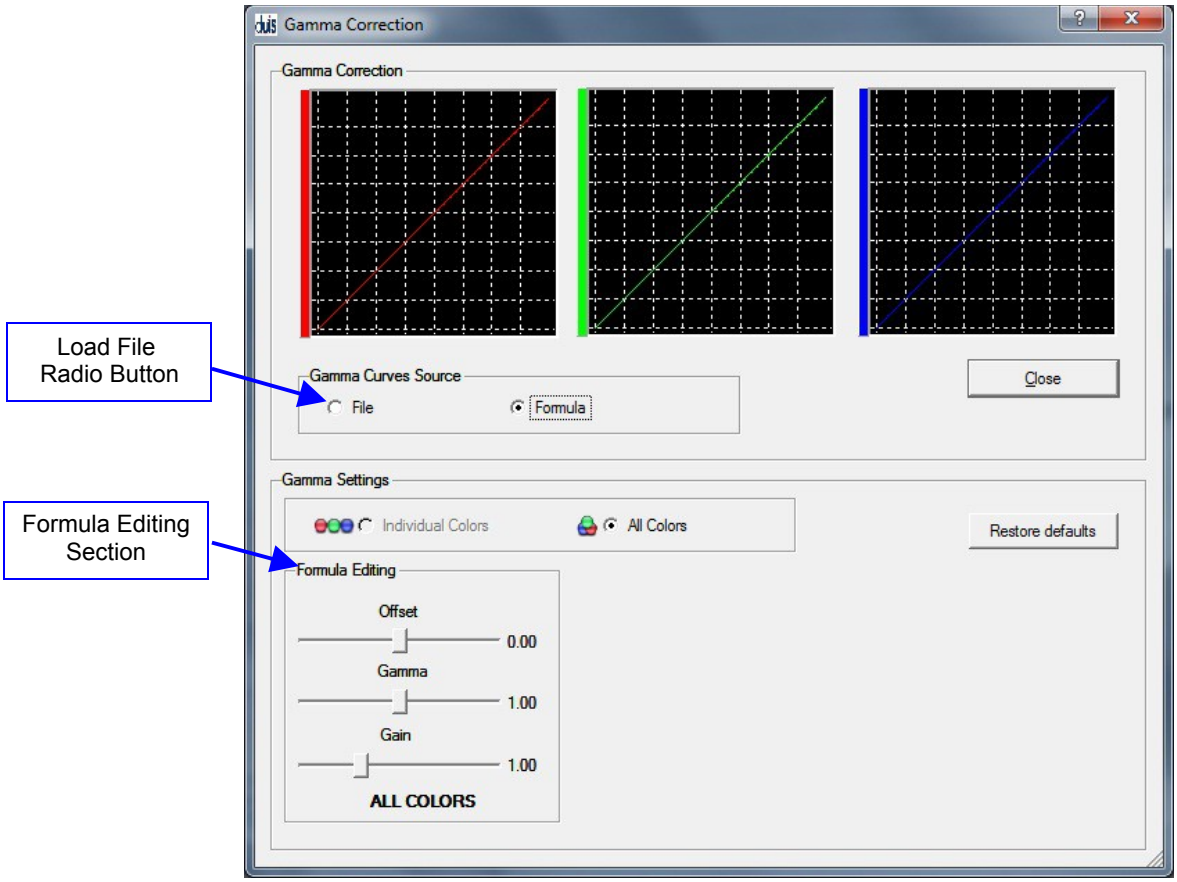


Figure 18: Gamma Correction Pop-Up Window

5.4.4 Sync I/O Tab

The Sync I/O tab is illustrated below in Figure 19.

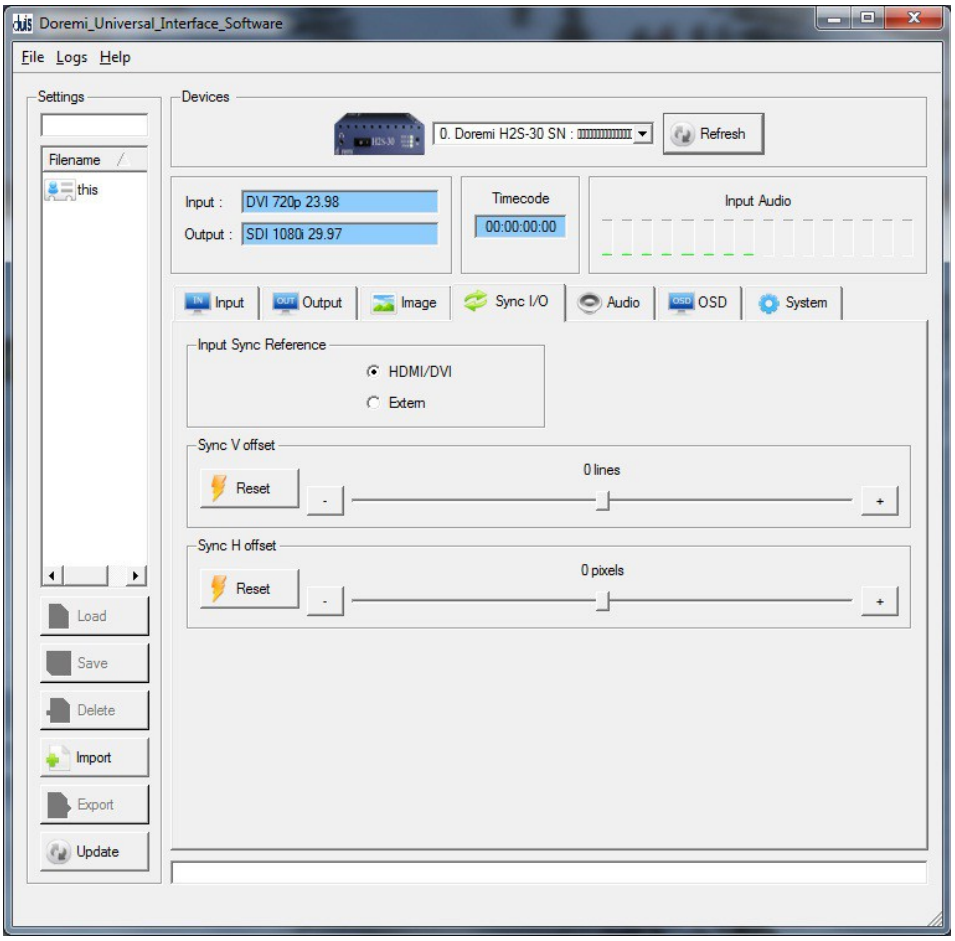


Figure 19: H2S-30 Control Panel Sync I/O Tab

All parameters are explained earlier in this manual in Section 3.4.

5.4.5 Audio Tab

The Audio tab is illustrated below in Figure 20.

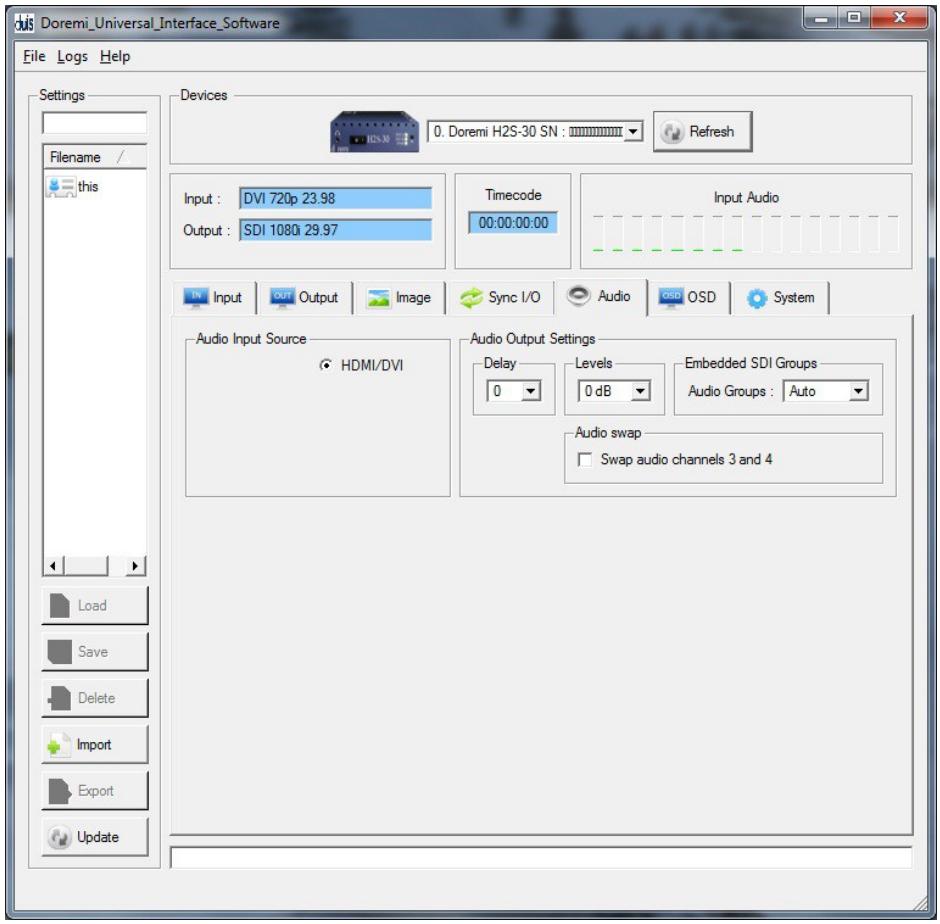


Figure 20: H2S-30 Control Panel Audio Tab

All parameters are explained earlier in this manual in Section 3.5.

5.4.6 OSD Tab

The OSD tab is illustrated below in Figure 21.

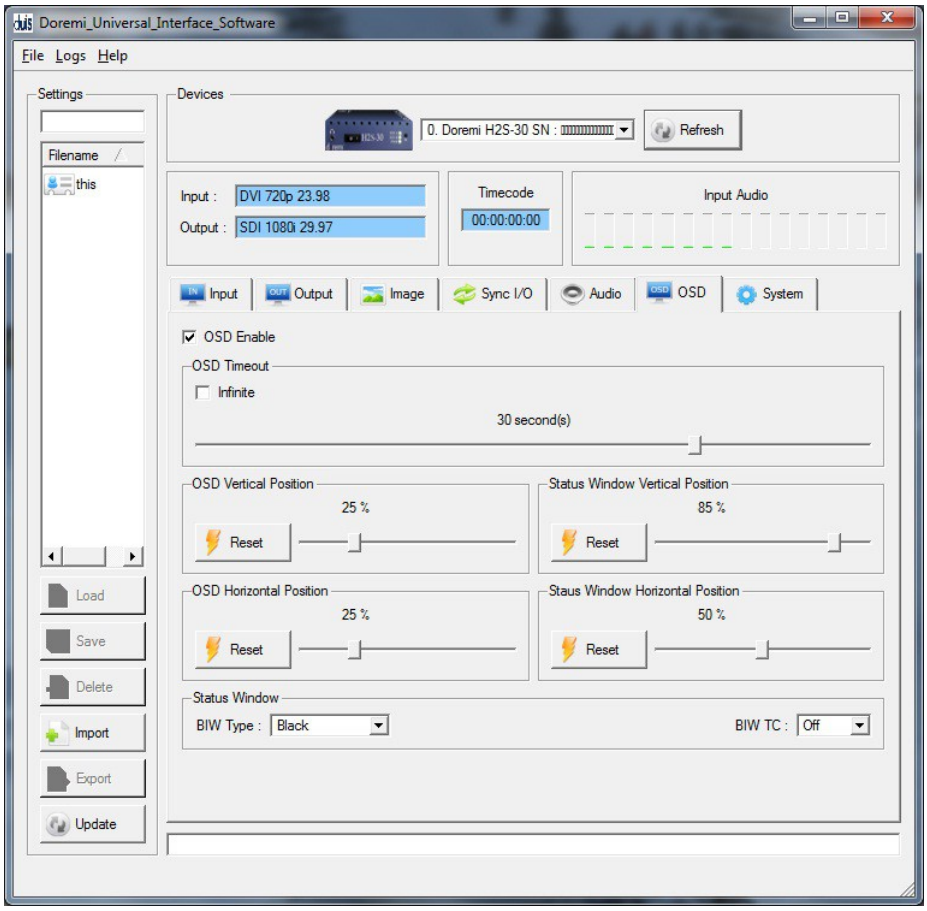


Figure 21: H2S-30 Control Panel OSD Tab

All parameters are explained earlier in this manual in Section 3.6.

5.4.7 System Tab

The System tab is illustrated below in Figure 22.

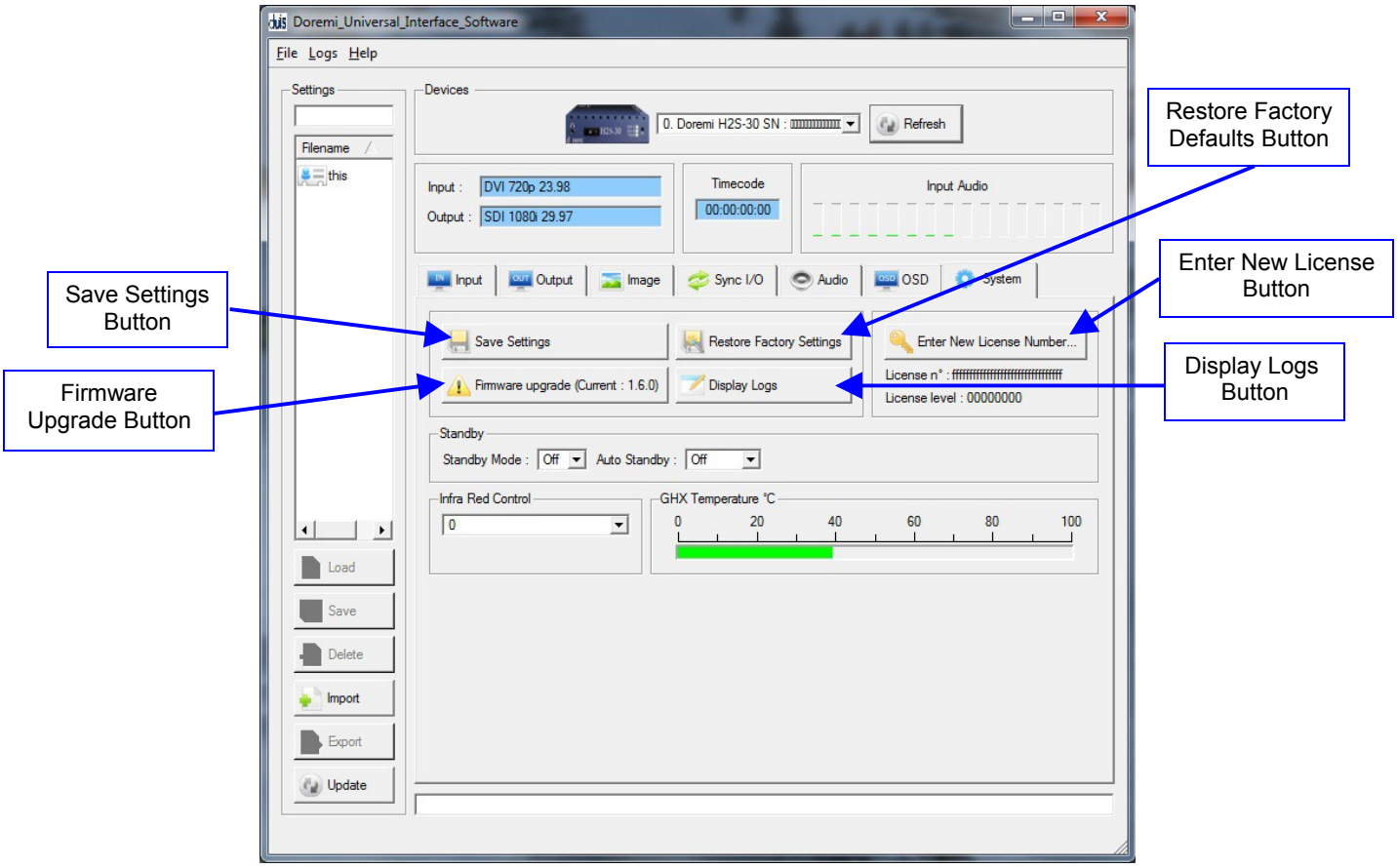


Figure 22: H2S-30 Control Panel System Tab

The parameters are explained earlier in this manual in Section 3.7.

- In addition, the System tab can be used to perform the following functions:
- To save the current settings to flash, click on the “Save Settings” button (see Figure 22).
- To restore the factory default settings, click on the “Restore Factory Settings” button (see Figure 22).
- To enter a new license number, click on the “Enter New License Number ...” button and type the new license number in the pop-up window (see Figure 22).
- To perform a firmware upgrade, click on the “Firmware upgrade (Current: 1.6.0)” button – note that this button provides the current firmware version installed on the connected unit, after “Current:”. See Section 6.1 for detailed upgrade steps to follow (see Figure 22).
- To display the logs, click on the “Display Logs” button.

- A window containing the logs will appear:

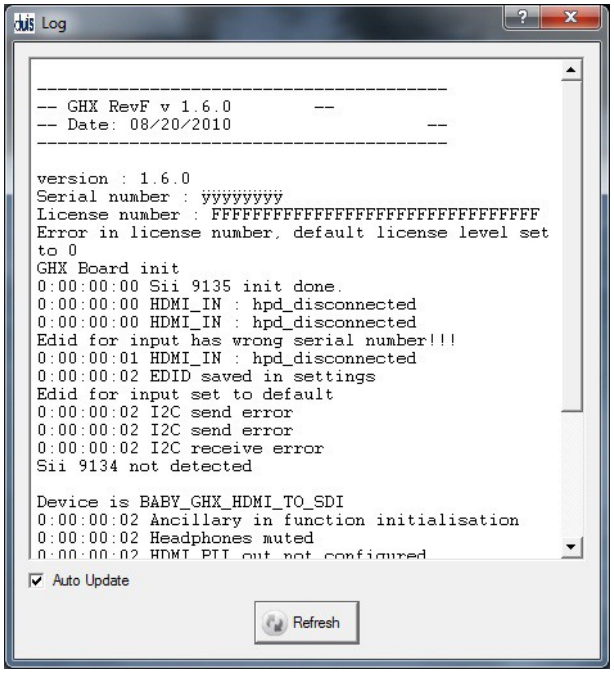


Figure 23: Log Window

- Select “Auto Update” from the Log Window to see all messages (see Figure 23).

6 Firmware Update

The firmware can be updated through a USB using the DUIS. In case one of the files listed in the procedures below is missing, please contact Doremi Labs (see Section 1.3).

Note: The H2S-30, S2H-30, and GHX-10 all use the same firmware version, which is included with the DUIS software.

6.1 USB Update

The firmware can be updated through USB using the Doremi Universal Interface Software as presented in Section 5.4.7.

- To perform an update via USB, follow the steps below:
- Connect the H2S-30 to the computer using the USB cable provided with the unit.
- Start the Doremi Universal Interface Software. See Section 5 for more information.
- Go to the “System” tab (see Section 5.4.7).
- Click on the “Firmware upgrade” button.
- Click the Browse button and select the firmware file (e.g., “ghx_1.6.0.bin”) and then click the “Upgrade now” button (see Figure 24).

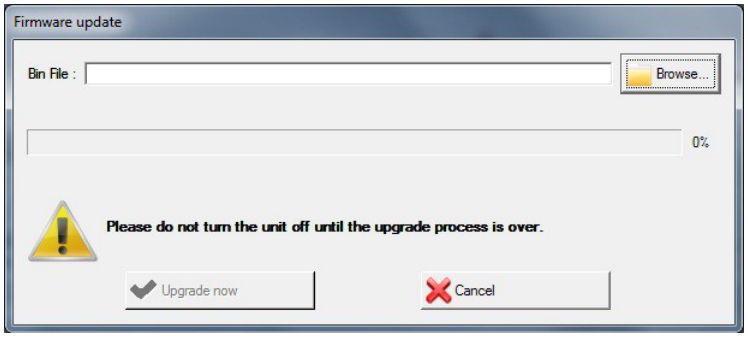


Figure 24: Firmware Update - Browse Window

- Once the update is completed, cycle the power of the H2S-30.

7 Acronyms

Term	Definition
DUIS	Doremi Universal Interface Software
DVI	Digital Visual Interface
HDMI	High-Definition Multimedia Interface
HD-SDI	High-Definition Serial Digital Interface
IR	Infra Red
OSD	On Screen Display
PAR	Pixel Aspect Ratio
SDI	Serial Digital Interface
USB	Universal Serial Bus

8 Document Revision History

Date	Version	Description
02/10/2011	1.0	First version.
03/02/2011	1.1	New pictures added.
07/26/2012	1.2	Logo and contact information updated.
02/13/2013	1.3	Minor revisions made to entire document. Section 1 updated.